

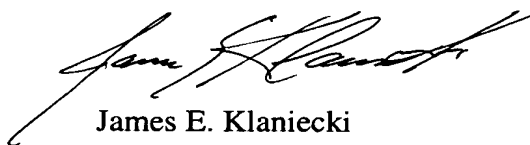
REMARKS

Applicants have amended the claims to more particularly point out and distinctly claim the present invention. Claims 1-8 have been amended to limit Flt3-ligand polypeptides to the human sequence (SEQ ID NO:6) and claims 19-26, 29 and 30 have been amended to variants having 90% identity. Claims 9-16, 27 and 28 have been cancelled because they are redundant in that they were also drawn to human Flt3-ligand polypeptides. Applicants urge that the above amendments are fully supported by the application as originally filed and therefore do not constitute new matter.

Following the amendments, claims 1-8, 19-26, 29 and 30 are pending in the application with claims 1-8, 19-26, 29 and 30 being in independent format.

Reconsideration and allowance of the pending claims is kindly requested.

Respectfully submitted,



James E. Klaniecki
Registration No. 38,207

Immunex Corporation
51 University Street
Seattle, WA 98101
Telephone: (206) 587-0430 ext. 4145
Facsimile: (206) 233-0644

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Date: Sept. 4, 2002

Signed: Nanci M. Kertson
Nanci M. Kertson

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of:
Stewart D. Lyman and
M. Patricia Beckmann

Docket No.: 2813-L

Group Art Unit: 1644

Serial No: 08/994,468

Examiner: P. Gambel

Filed: December 19, 1997

CPA Filed: May 26, 2000

For: MEDIUM CONTAINING FLT3 LIGAND FOR CULTURING
HEMATOPOIETIC CELLS (as amended)

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PROPOSED CLAIMS

Version with Markings to Show Changes

1. (Three Times Amended) A hematopoietic cell expansion medium, comprising a cell growth medium and a Flt3-ligand polypeptide in an amount sufficient to cause hematopoietic cell expansion, wherein the Flt3-ligand polypeptide is selected from the group consisting of: flt3-ligand, wherein the flt3-ligand

(a) polypeptides comprising amino acids 28-160 of SEQ ID NO:6; and

(b) polypeptides comprising a fragment of amino acids 28-160 of SEQ ID NO:6, wherein the fragment binds flt3, and is in an amount sufficient to cause hematopoietic cell expansion.

2. (Four Times Amended) An *in vitro* method for expanding hematopoietic cells, the method comprising contacting the cells with a flt3Flt3-ligand polypeptide in an amount sufficient to cause hematopoietic cell expansion, wherein the flt3Flt3-ligand polypeptide is selected from the group consisting of:

(a) polypeptides comprising amino acids 28-160 of SEQ ID NO:6; and

(b) polypeptides comprising a fragment of amino acids 28-160 of SEQ ID NO:6, wherein the fragment binds flt3 and is in an amount sufficient to cause expansion of the hematopoietic cells.

3. (Twice Amended) A hematopoietic cell expansion medium, comprising a cell growth medium, ~~flt3-ligand~~ and G-CSF and a Flt3-ligand polypeptide in an amount sufficient to cause hematopoietic cell expansion, wherein the Flt3-ligand polypeptide is selected from the group consisting of:

(a) polypeptides comprising amino acids 28-160 of SEQ ID NO:6; and

(b) polypeptides comprising a fragment of amino acids 28-160 of SEQ ID NO:6, wherein the ~~flt3-ligand-fragment~~ binds flt3, ~~and is in an amount sufficient to cause hematopoietic cell expansion.~~

4. (Twice Amended) A hematopoietic cell expansion medium, comprising a cell growth medium, ~~flt3-ligand~~ and GM-CSF and a Flt3-ligand polypeptide in an amount sufficient to cause hematopoietic cell expansion, wherein the Flt3-ligand polypeptide is selected from the group consisting of:

(a) polypeptides comprising amino acids 28-160 of SEQ ID NO:6; and

(b) polypeptides comprising a fragment of amino acids 28-160 of SEQ ID NO:6, wherein the ~~flt3-ligand-fragment~~ binds flt3, ~~and is in an amount sufficient to cause hematopoietic cell expansion.~~

5. (Twice Amended) A hematopoietic cell expansion medium, comprising a cell growth medium, ~~flt3-ligand~~ and SF and a Flt3-ligand polypeptide in an amount sufficient to cause hematopoietic cell expansion, wherein the Flt3-ligand polypeptide is selected from the group consisting of:

(a) polypeptides comprising amino acids 28-160 of SEQ ID NO:6; and

(b) polypeptides comprising a fragment of amino acids 28-160 of SEQ ID NO:6, wherein the ~~flt3-ligand-fragment~~ binds flt3, ~~and is in an amount sufficient to cause hematopoietic cell expansion.~~

6. (Twice Amended) A hematopoietic cell expansion medium, comprising a cell growth medium, ~~flt3-ligand~~ and EPO and a Flt3-ligand polypeptide in an amount sufficient to cause hematopoietic cell expansion, wherein the Flt3-ligand polypeptide is selected from the group consisting of:

(a) polypeptides comprising amino acids 28-160 of SEQ ID NO:6; and

(b) polypeptides comprising a fragment of amino acids 28-160 of SEQ ID NO:6, wherein the ~~flt3-ligand-fragment~~ binds flt3, ~~and is in an amount sufficient to cause hematopoietic cell expansion.~~

7. (Twice Amended) A hematopoietic cell expansion medium, comprising a cell growth medium, ~~flt3-ligand~~ and a GM-CSF/IL-3 fusion protein and a Flt3-ligand polypeptide in an amount sufficient to cause hematopoietic cell expansion, wherein the Flt3-ligand polypeptide is selected from the group consisting of:

- (a) polypeptides comprising amino acids 28-160 of SEQ ID NO:6; and
- (b) polypeptides comprising a fragment of amino acids 28-160 of SEQ ID NO:6, wherein the ~~flt3-ligand fragment~~ binds flt3, and ~~is in an amount sufficient to cause hematopoietic cell expansion.~~

8. (Twice Amended) A hematopoietic cell expansion medium, comprising a cell growth medium, ~~flt3-ligand~~ and IL-6 and a Flt3-ligand polypeptide in an amount sufficient to cause hematopoietic cell expansion, wherein the Flt3-ligand polypeptide is selected from the group consisting of:

- (a) polypeptides comprising amino acids 28-160 of SEQ ID NO:6; and
- (b) polypeptides comprising a fragment of amino acids 28-160 of SEQ ID NO:6, wherein the ~~flt3-ligand fragment~~ binds flt3, and ~~is in an amount sufficient to cause hematopoietic cell expansion.~~

Cancel claims 9-16.

19. (Amended) ~~A~~The hematopoietic cell expansion medium, comprising a cell growth medium and a Flt3-ligand polypeptide in an amount sufficient to cause hematopoietic cell expansion, of claim 1, wherein the ~~F~~flt3-ligand polypeptide is selected from the group consisting of:

- (a) polypeptides that are a soluble polypeptide comprising amino acids 28-160 of SEQ ID NO:6 and a soluble polypeptide capable of binding flt3 that comprises an amino acid sequence that is at least 9080% identical to a polypeptide comprising the amino acids 28-160 of SEQ ID NO:6; and
- (b) polypeptides comprising a fragment of (a), wherein the fragment binds flt3.

20. (Amended) ~~The method~~ An in vitro method for expanding hematopoietic cells, of claim 2, the method comprising contacting the cells with a Flt3-ligand polypeptide in

an amount sufficient to cause hematopoietic cell expansion, wherein the Flt3-ligand polypeptide is selected from the group consisting of:

~~wherein the flt3-ligand is selected from the group consisting of a soluble polypeptide comprising amino acids 28-160 of SEQ ID NO:6 and a soluble polypeptide capable of binding flt3 that~~

(a) polypeptides that are comprises an amino acid sequence that is at least 9080% identical to a polypeptide comprising the amino acids 28-160 of SEQ ID NO:6; and

(b) polypeptides comprising a fragment of (a), wherein the fragment binds flt3.

21. (Amended) AThe hematopoietic cell expansion medium, comprising a cell growth medium, G-CSF and a of claim 3, wherein the flt3Flt3-ligand polypeptide in an amount sufficient to cause hematopoietic cell expansion, wherein the Flt3-ligand polypeptide is selected from the group consisting of:

~~is selected from the group consisting of a soluble polypeptide comprising amino acids 28-160 of SEQ ID NO:6 and a soluble polypeptide capable of binding flt3 that comprises an amino acid sequence that is~~

(a) polypeptides that are at least 9080% identical to a polypeptide comprising the amino acids 28-160 of SEQ ID NO:6; and

(b) polypeptides comprising a fragment of (a), wherein the fragment binds flt3.

22. (Amended) AThe hematopoietic cell expansion medium, comprising a cell growth medium, GM-CSF and a of claim 4, wherein the flt3Flt3-ligand polypeptide in an amount sufficient to cause hematopoietic cell expansion, wherein the Flt3-ligand polypeptide is selected from the group consisting of:

~~is selected from the group consisting of a soluble polypeptide comprising amino acids 28-160 of SEQ ID NO:6 and a soluble polypeptide capable of binding flt3 that comprises an amino acid sequence that is~~

(a) polypeptides that are -at least 9080% identical to a polypeptide comprising the amino acids 28-160 of SEQ ID NO:6; and

(b) polypeptides comprising a fragment of (a), wherein the fragment binds flt3.

23. (Amended) AThe hematopoietic cell expansion medium, comprising a cell growth medium, SF and a of claim 5, wherein the flt3Flt3-ligand polypeptide in an amount

sufficient to cause hematopoietic cell expansion, wherein the Flt3-ligand polypeptide is selected from the group consisting of:

~~is selected from the group consisting of a soluble polypeptide comprising amino acids 28-160 of SEQ ID NO:6 and a soluble polypeptide capable of binding flt3 that comprises an amino acid sequence that is~~

(a) polypeptides that are at least 9080% identical to a polypeptide comprising the amino acids 28-160 of SEQ ID NO:6; and

(b) polypeptides comprising a fragment of (a), wherein the fragment binds flt3.

24. (Amended) AThe hematopoietic cell expansion medium, comprising a cell growth medium, EPO and a of claim 6, wherein the flt3Flt3-ligand polypeptide in an amount sufficient to cause hematopoietic cell expansion, wherein the Flt3-ligand polypeptide is selected from the group consisting of:

~~is selected from the group consisting of a soluble polypeptide comprising amino acids 28-160 of SEQ ID NO:6 and a soluble polypeptide capable of binding flt3 that comprises an amino acid sequence that is~~

(a) polypeptides that are at least 9080% identical to a polypeptide comprising the amino acids 28-160 of SEQ ID NO:6; and

(b) polypeptides comprising a fragment of (a), wherein the fragment binds flt3.

25. (Amended) AThe hematopoietic cell expansion medium, comprising a cell growth medium, GM-CSF/IL-3 fusion protein and a of claim 7, wherein the flt3Flt3-ligand polypeptide in an amount sufficient to cause hematopoietic cell expansion, wherein the Flt3 polypeptide is selected from the group consisting of:

~~is selected from the group consisting of a soluble polypeptide comprising amino acids 28-160 of SEQ ID NO:6 and a soluble polypeptide capable of binding flt3 that comprises an amino acid sequence that is~~

(a) polypeptides that are at least 9080% identical to a polypeptide comprising the amino acids 28-160 of SEQ ID NO:6; and

(b) polypeptides comprising a fragment of (a), wherein the fragment binds flt3.

26. (Amended) AThe hematopoietic cell expansion medium, comprising a cell growth medium, IL-6 and a of claim 8, wherein the flt3Flt3-ligand polypeptide in an amount

sufficient to cause hematopoietic cell expansion, wherein the Flt3 polypeptide is selected from the group consisting of:

~~is selected from the group consisting of a soluble polypeptide comprising amino acids 28-160 of SEQ ID NO:6 and a soluble polypeptide capable of binding flt3 that comprises an amino acid sequence that is~~

(a) polypeptides that are at least 9080% identical to a polypeptide comprising the amino acids 28-160 of SEQ ID NO:6; and

(b) polypeptides comprising a fragment of (a), wherein the fragment binds flt3.

Cancel claim 27 and 28.

29. (Twice Amended) ~~A~~The hematopoietic cell expansion medium, comprising a cell growth medium, a cellular growth factor and a of claim 17, wherein the flt3Flt3-ligand polypeptide in an amount sufficient to cause hematopoietic cell expansion, wherein the Flt3 polypeptide is selected from the group consisting of:

~~is selected from the group consisting of a soluble polypeptide comprising amino acids 28-160 of SEQ ID NO:6 and a soluble polypeptide capable of binding flt3 that comprises an amino acid sequence that is~~

(a) polypeptides that are at least 9080% identical to a polypeptide comprising the amino acids 28-160 of SEQ ID NO:6; and

(b) polypeptides comprising a fragment of (a), wherein the fragment binds flt3.

30. (Amended) ~~The~~An in vitro ~~method of claim 18~~ for expanding hematopoietic cells, the method comprising contacting the cells with a Flt3-ligand polypeptide and a cellular growth factor in amounts sufficient to cause hematopoietic cell expansion, wherein the flt3-ligand is selected from the group consisting of:

~~a soluble polypeptide comprising amino acids 28-160 of SEQ ID NO:6 and a soluble polypeptide capable of binding flt3 that comprises an amino acid sequence that is~~

(a) polypeptides that are at least 9080% identical to the amino acids 28-160 of SEQ ID NO:6; and

(b) polypeptides comprising a fragment of (a), wherein the fragment binds flt3.